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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/585,036	05/04/2007	Anders Umegard	800738-0009	6187

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EXAMINER

CLERKLEY, DANIELLE A

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3643

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/585,036	Applicant(s) UMEGARD ET AL.	
	Examiner DANIELLE CLERKLEY	Art Unit 3643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 3,4,9,12,13,15-20 and 23-26 is/are pending in the application.
- 5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 3,4,9,12,13,15-20 and 23-26 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 23, 24, 25, 3, 4, 9, 17, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loosveld (EP 0657098 A1) in view of Bazin et al. (U.S. Patent No. 5,743,209) and Innings et al. (U.S. Patent No. 6,009,832).

3. In re claims 23 and 24, Loosveld discloses a method of milking animals comprising measuring the milk flow from all the teats of the udder of an animal being milked (Col. 4, lines 17-23: using a milk meter device, sensor 27) which generates data representative of the measured milk flow rate (Col. 4, lines 23-29), and analyzing said data using an analyzer device (processing device 23 to receive said data) to detect an abnormal milk flow indicated by a predetermined departure from a predicted relationship between the milk flow rate and the time from commencement of milking (Col. 5, lines 2-36) and generate a single output (Col. 5, lines 39-41) in response to said departure signaling that medical inspection of the animal is advisable (Col. 3, lines 20-25 and Col. 5, lines 33-41); said single output being generated whenever the flow from only one, any two, any three or any four teats is abnormal (Loosveld discusses in Col. 5, lines 23-41, a signal is produced in response to a difference in milk flow that is greater than a permissible deviation in the milk flow from an udder of an animal, regardless of whether

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one, two, three or four of the teats are injured or infected). In re claim 3, Loosveld discloses the analysis comprises calculations (Col. 5, lines 23-27: processing unit 23 uses statistical techniques to determine deviations) of the rate of change in the reducing milk flow rate (Col. 5, lines 33-36); In re claim 9, Loosveld discloses the predicted relationship between the milk flow rate (Col. 5, lines 11-13) and the time from commencement of milking (Col. 5, lines 8-10: milk flow period, beginning of milk flow) for an animal is derived from data collected during one or more previous milkings of the same animal (Col. 1, line 8 and lines 52-56: In re claim 17, data is measured and stored, thus enabling the user to refer to historical data for convenient use); and in re claim 25, Loosveld discloses wherein the analysis includes determining a peak flow rate at which the flow rate remains substantially level for a major part of the animal milking procedure, and determining the duration of the milk flow at the peak flow rate and the duration of the flow rate at the peak flow rate (Col. 5, lines 14-18).

4. Loosveld discloses the method of measuring milk flow, but fails to specifically disclose the respective milk flows from the respective teats being brought together and the total milk flow being measured using a single milk meter device. However, Bazin et al. teaches a method of milking animals wherein the respective milk flows from the respective teats being brought together and the total milk flow being measured (Col. 4, lines 16-18) using a single milk meter device (Col. 3, lines 26-32) to generate data representative of the measured total milk flow rate and analyzing said data using an analyzer device to detect abnormal milk flow (Col. 6, lines 52-54: comparisons made using previous milk flow curves). It would have been obvious to one having ordinary skill

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in the art at the time of the invention to have modified the method of Loosveld to include measurement of the total milk flow as taught by Bazin et al. for the advantage of readily and efficiently identifying if an animal being milked is ill and/or in need of attention.

5. Loosveld discloses the invention as discussed above, but fails to disclose the detected departure is a departure from a predicted stepped reduction in the milk flow rate towards the end of the milking procedure for the animal. However, Innings et al. teaches a method of milking animals, wherein it is well known in the art that analysis of total milk flow is shown graphically as a stepped reduction (representative of the point of time when the milk flow ceases for each teat) in the milk flow rate towards the end of the milking procedure (as discussed in Col. 2, lines 42-48). In re claims 12 and 13, the receiving and analyzing device (Loosveld processing device 23) is arranged to calculate the rate of change in the reducing milk flow rate (Loosveld Col. 5, lines 11-13) in order to determine step changes in the milk flow rate by counting the number of steps in the reducing milk flow rate and generating a signal (processing device 23 of Loosveld emits signal upon detected deviation and therefore is capable of producing a signal upon establishing four steps as such a threshold) if less than four steps are counted (based on the known analysis as taught by Innings et al. above). It would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the milking method of Loosveld to include the known statistical analysis of the stepped reduction in the milk flow rate as taught by Innings et al. for the advantage of comparatively determining when, based on the finish time of the milking, the milk flow

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rate deviates from the predicted value to identify if an animal being milked is ill and/or in need of attention.

6. In re claims 18 and 19, Loosveld in view of Bazin et al. and Innings et al. further disclose wherein the milk flow meter includes means (Bazin et al. Col. 5, line 26 through Col. 6, line 20: data processing software is capable of performing the function to achieve the desired analytical and data processing results) to collect and compress milk flow data into data packages and to transfer the data packages to the data receiving and analyzing device at intervals; and further wherein the data receiving and analyzing device receives data packages from at least two milk meters (Bazin et al. Col. 5, lines 56-60) and includes means (Bazin et al. data processing software) for decompressing the data packages for analysis and/or display of the data.

7. Claims 6, 7, 26, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loosveld (EP 0657098 A1) in view of Bazin et al. (U.S. Patent No. 5,743,209) and Innings et al. (U.S. Patent No. 6,009,832), as applied to claims 23, 24, 25, 3, 4, 9, 17, 18 and 19 above, and further in view of Wakui et al. (U.S. Patent No. 5,152,246).

8. In re claim 6, 26 and 15, Loosveld as modified by Bazin et al. and Innings et al. discloses the invention as discussed above including a milk meter device (Loosveld 27) and an analyzer device (processing device 23), but fails to specifically disclose a ratio of the peak flow duration to the peak flow rate is calculated. However, Wakui et al. teaches a method of milking animals includes a ratio of the peak flow duration to the peak flow rate is calculated (as shown in graph of Fig. 2b and discussion Col. 4, line 62 through

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Col. 5, lines 1-15); and further in re claim 26, data is generated and analyzed to determine a peak flow rate at which the flow rate remains substantially level for a major part of the animal milking procedure, and the duration of the milk flow at the peak flow rate is determined (as shown in Fig. 8). It would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the milking method of Loosveld as modified by Bazin et al. and Innings et al. to include data analysis as taught by Wakui et al. to selectively monitoring the milking animal, and possibly discontinue milking procedures, when the calculated ratio value departs from a predicted value (reference value as shown in Wakui et al. Fig. 8).

9. In re claims 7 and 16, Loosveld as modified by Bazin et al. and Innings et al. discloses the invention as discussed above, including comparing predetermined milk flow characteristic values with deviations in the measured data and further signaling the milking animal when the deviations exceed the predetermined values (Loosveld abstract) but fails to specifically disclose comparing the peak flow rate and the duration of the peak flow rate. However, Wakui et al. teaches, in Fig. 8, comparing the peak flow rate (flow rate) and the duration of the peak flow rate (time) with predicted values (dashed line indicating the predicted flow rate), wherein the peak flow rate departs significantly from the predicted peak flow rate but the peak flow duration remains within acceptable limits of the peak flow rate duration (as discussed in Col. 1, lines 54-68). It would have been obvious to one having ordinary skill in the art to have modified the milking method of Loosveld as modified by Bazin et al. and Innings et al. to include data analysis as taught by Wakui et al. to selectively monitoring the milking animal, and

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possibly discontinue milking procedures when the peak flow rate departs from the predicted peak flow rate.

10. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Loosveld (EP 0657098 A1) in view of Bazin et al. (U.S. Patent No. 5,743,209) and Innings et al. (U.S. Patent No. 6,009,832), as applied to claims 23, 24, 25, 3, 4, 9, 17, 18 and 19 above, and further in view of Mein (U.S. Patent No. 5,178,095).

11. In re claim 20, Loosveld as modified by Bazin et al. and Innings et al. discloses the invention as discussed above, including using an analyzer (Loosveld processing device 23) for measuring and storing statistical data of milking conditions, but fails to specifically disclose data such as milking vacuum levels, hormone stimulation, and/or time of teat cup detachment. However, Mein teaches it is old and notoriously well-known to analyze milking conditions (as shown in Fig. 4), namely the milking vacuum level data for a subsequent milking of the animal, generated with the milk flow rate data during the milking of the same animal (Col. 5, lines 36-43). It would have been obvious to one having ordinary skill in the art at the time of the invention to have determined several milking conditions as taught by Mein based on the data generated by the method of Loosveld as modified by Bazin et al. and Innings et al. for the advantage of monitoring conditions on an animal-by-animal basis, by comparing data previously recorded.

Response to Arguments

12. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection. It is noted that Loosveld as modified by

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Bazin et al. and Innings et al. above, teach the data collected, representative of the measured total milk flow rate, in comparison with the predicted milk flow rate, would allow one to determine injury and/or illness in only one, any two, any three or any four teats, such that the analysis of the deviation in milk flow (as best described by Loosveld Col. 5, lines 23-41) inherently indicates an abnormality as caused by one, two, three or four teats.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIELLE CLERKLEY whose telephone number is

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(571)270-7611. The examiner can normally be reached on M-TH 8:00 AM - 5:00 PM EST, F 8:00 AM - 4:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Poon can be reached on (571) 272-6891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DANIELLE CLERKLEY/
Examiner, Art Unit 3643

/David J Parsley/
Primary Examiner, Art Unit 3643